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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,419

Applicant(s)

DURHAM ET AL.

Examiner

Jared I. Rutz

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, 15, 16, 18-24 and 26-32 is/are rejected.
- 7) ☒ Claim(s) 7, 14, 17, 25, and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-33 as amended on 7/18/2006 with the filing of a Request for Continued Examination are pending in the instant application. Applicant's arguments and amendments have been carefully and fully considered, and are partially persuasive.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 2, 6, 8, 9, 13, 15, 16, 18, 27, 28, and 32** are rejected under 35

U.S.C. 102(e) as being anticipated by Leung et al (US 2003/0046270).

4. **Claim 1** is taught by Leung as:

a. *A computerized system for managing a geographically separated enterprise storage system, comprising a storage grid manager for receiving requests for storing files from users that are remote from storage cells of the enterprise storage system. See data management server (DMS) item 104 of figure 1. Paragraph 0078 discuss conditions in which the DMS decides where to store data, and lines 18-21 show that one such condition is when a user stores a data file in the storage system. Figure 1 shows Storage devices 116 separated*

from the Data Management Server 104 and from User Systems 102 by a communication Network 112. Paragraph 0024 shows that communication network 112 may be a WAN, which provides geographical separation among the components of the storage system. Additionally, paragraph 0031 describes the storage system as being a distributed system.

b. *And for routing the requests to storage grid controllers associated with selected storage cells of the enterprise storage system where the files will be stored.* Paragraph 0029 lines 1-4 shows that the DMS automates the storing of data to the available storage devices. Each of the storage devices (item 116 of figure 1) comprise a storage cell and the associated controller necessary for their function.

c. *Wherein the selected storage cells are identified based on at least one predetermined performance parameter in case that a storage cell that is identified based on a geographical parameter is not optimal.* Paragraphs 0049-0055 give examples of device performance parameters that are used by the DMS to determine the storage location. Paragraph 0076 lines 10-16 shows that a constraint on the storage can be that it is stored on a local storage device. If it is not optimal to store the data on a local storage device, a different storage constraint can be used.

5. **Claim 2** is taught by Leung as:

d. *The system of claim 1, wherein the storage grid controllers are each associated with a single storage cell. The storage devices are shown to be various dedicated storage devices in paragraph 0031.*

e. *And wherein the storage grid controllers provide resource availability information about the storage cells to the storage grid manager. Paragraph 0050 lines 11-14 shows that the DMS dynamically monitors the available capacity information by examining the actual usage of the storage device.*

6. **Claim 6** is taught by Leung as:

f. *The system of claim 1, wherein the predetermined performance parameter is selected from the group consisting of a user identity, a storage cost, a user requirement, a usage pattern, a security requirement, a storage cell availability, a redundancy requirement and a network optimization requirement. Paragraphs 0050-0055 and 0059-0064 give examples of the parameters the DMS may use to decide file storage locations. These examples include user identity, storage cost, user requirements, usage patterns, storage availability, redundancy and network optimization.*

7. **Claim 8** is taught by Leung as:

g. *A computerized system for managing a geographically separated enterprise storage system, comprising: a storage grid manager for receiving requests for storing files from users that are remote from storage cells of the enterprise storage system. See data management server (DMS) item 104 of figure 1. Paragraph 0078 discuss conditions in which the DMS decides where to*

store data, and lines 18-21 show that one such condition is when a user stores a data file in the storage system. Figure 1 shows Storage devices 116 separated from the Data Management Server 104 and User Systems 102 by a communication Network 112. Paragraph 0024 shows that communication network 112 may be a WAN, which provides geographical separation among the components of the storage system. Additionally, paragraph 0031 describes the storage system as being a distributed system.

h. *And a set of storage grid controllers associated with a set of storage cells of the enterprise storage system. Each of the storage devices (item 116 of figure 1) comprise a storage cell and the associated controller necessary for their function.*

i. *Wherein the storage grid manager identifies selected storage cells for storing the files based on at least one predetermined performance parameter.*

Paragraphs 0049-0055 give examples of device performance parameters that are used by the DMS to determine the storage location.

j. *And routes the requests to the storage grid controllers associated with the selected storage cells in case that a storage cell that is identified based on a geographical parameter is not optimal. Paragraph 0029 lines 1-4 shows that the DMS automates the storing of data to the available storage devices. Paragraph 0076 lines 10-16 shows that a constraint on the storage can be that it is stored on a local storage device. If it is not optimal to store the data on a local storage device, a different storage constraint can be used.*

8. **Claim 9** is taught by Leung as:

k. *The system of claim 8, wherein each of the set of the storage grid controllers are each associated with a single storage cell. The storage devices are shown to be various dedicated storage devices in paragraph 0031.*

l. *And wherein the set of storage grid controllers provide resource availability information about the set of storage cells to the storage grid manager.*

Paragraph 0050 lines 11-14 shows that the DMS dynamically monitors the available capacity information by examining the actual usage of the storage device.

9. **Claim 13** is taught by Leung as:

m. *The system of claim 9, wherein the predetermined performance parameter is selected from the group consisting of a user identity, a storage cost, a user requirement, a desired cell usage pattern, a security requirement, a storage cell availability, a redundancy requirement and a network optimization requirement.*

Paragraphs 0050-0055 and 0059-0064 give examples of the parameters the DMS may use to decide file storage locations. These examples include user identity, storage cost, user requirements, usage patterns, storage availability, redundancy and network optimization.

10. **Claim 15** is taught by Leung as:

n. *A computer-implemented method for storing files in a geographically separated enterprise storage system, comprising: receiving requests that are remote from storage cells of the enterprise storage system on a storage grid*

manager to store the files. See data management server (DMS) item 104 of figure 1. Figure 1 shows Storage devices 116 separated from the Data Management Server 104 and User Systems 102 by a communication Network 112. Paragraph 0024 shows that communication network 112 may be a WAN, which provides geographical separation among the components of the storage system. Additionally, paragraph 0031 describes the storage system as being a distributed system.

o. *Identifying storage cells of the enterprise storage system for storing the files based on at least one performance parameter in case that a storage cell that is identified based on a geographical parameter is not optimal.* Paragraphs 0049-0055 give examples of device performance parameters that are used by the DMS to determine the storage location. Paragraph 0076 lines 10-16 shows that a constraint on the storage can be that it is stored on a local storage device. If it is not optimal to store the data on a local storage device, a different storage constraint can be used.

p. *Routing the requests from the storage grid manager to storage grid controllers associated with the storage cells.* Paragraph 0029 lines 1-4 shows that the DMS automates the storing of data to the available storage devices.

q. *And storing the files in the storage cells.* Paragraph 0029 lines 1-4 shows that the DMS automates the storing of data to the available storage devices.

11. **Claim 16** is taught by Leung as:

r. *The method of claim 15, wherein the at least one performance parameter is selected from the group consisting of a user identity, a storage cost, a user requirement, a desired cell usage pattern, a security requirement, a storage cell availability, a redundancy requirement and a network optimization requirement.*

Paragraphs 0050-0055 and 0059-0064 give examples of the parameters the DMS may use to decide file storage locations. These examples include user identity, storage cost, user requirements, usage patterns, storage availability, redundancy and network optimization.

12. **Claim 18** is taught by Leung as:

s. *The method of claim 15, further comprising the storage grid controllers providing resource availability information about the set of storage cells to the storage grid manager, prior to the identifying step.* Paragraph 0050 lines 11-14 shows that the DMS dynamically monitors the available capacity information by examining the actual usage of the storage device.

13. **Claim 27** is taught by Leung as:

t. *A program product stored on a computer readable medium for managing a geographically separated enterprise storage system, which when executed, comprises a storage grid manager for receiving requests for storing files from users that are remote from storage cells of the enterprise storage system. See data management server (DMS) item 104 of figure 1. Figure 1 shows Storage devices 116 separated from the Data Management Server 104 and User Systems 102 by a communication Network 112. Paragraph 0024 shows that*

communication network 112 may be a WAN, which provides geographical separation among the components of the storage system. Additionally, paragraph 0031 describes the storage system as being a distributed system.

u. *And for routing the requests to storage grid controllers associated with selected storage cells of the enterprise storage system where the files will be stored.* Paragraph 0029 lines 1-4 shows that the DMS automates the storing of data to the available storage devices. Each of the storage devices (item 116 of figure 1) comprise a storage cell and the associated controller necessary for their function.

v. *Wherein the selected storage cells are identified based on at least one predetermined performance parameter in case that a storage cell that is identified based on a geographical parameter is not optimal.* Paragraphs 0049-0055 give examples of device performance parameters that are used by the DMS to determine the storage location. Paragraph 0076 lines 10-16 shows that a constraint on the storage can be that it is stored on a local storage device. If it is not optimal to store the data on a local storage device, a different storage constraint can be used.

14. **Claim 28** is taught by Leung as:

w. *The program product of claim 27, wherein the storage grid controllers are each associated with a single storage cell.* The storage devices are shown to be various dedicated storage devices in paragraph 0031.

x. *And wherein the storage grid controllers provide resource availability information about the storage cells to the storage grid manager.* Paragraph 0050 lines 11-14 shows that the DMS dynamically monitors the available capacity information by examining the actual usage of the storage device.

15. **Claim 32** is taught by Leung as:

y. *The program product of claim 27, wherein the predetermined performance parameter is selected from the group consisting of a user identity, a storage cost, a user requirement, a desired cell usage pattern, a security requirement, a storage cell availability, a redundancy requirement and a network optimization requirement.* Paragraphs 0050-0055 and 0059-0064 give examples of the parameters the DMS may use to decide file storage locations. These examples include user identity, storage cost, user requirements, usage patterns, storage availability, redundancy and network optimization.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. **Claims 4-5, 11-12, 20-21, 22-24, and 30-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al (cited supra) in view of Microsoft Windows NT

Server Administrator's Bible: Option Pack Edition (found at <http://www.windowsitlibrary.com/content/405/25/1.html>).

18. **Claim 4** is taught by Leung as shown supra with respect to claim 1.
19. Leung does not explicitly teach the use of a mapping between files and their storage location to allow the retrieval of the stored files.
20. The Microsoft Windows NT Server Administrator's Bible: Option Pack teaches:
 - z. *Wherein the storage grid manager further maintains a mapping that associates the files with the selected storage cells in which the files are stored.*The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location.
21. Leung and the Microsoft Windows NT Server Administrator's Bible: Option Pack are analogous art because they are from the same field of endeavor, the design of distributed storage systems.
22. At the time of the invention it would have been obvious to one of ordinary skill in the art to store a tree representing the locations of stored files on the server that users contact to store files.
23. The motivation for doing so would have been to allow users to retrieve their stored files, even if they had been moved by the DMS.
24. Therefore it would have been obvious to one of ordinary skill in the art to combine The Microsoft Windows NT Server Administrator's Bible: Option Pack with

Leung for the benefit of allowing users to retrieve their stored files to obtain the invention as specified in **claims 4-5**.

25. **Claim 5** is taught by the Microsoft Windows NT Server Administrator's Bible:
Option Pack as:

aa. *The system of claim 4, wherein the storage grid manager further receives requests to retrieve the files from the users, and wherein the storage grid manager consults the mapping to identify the selected storage cells and retrieve the files.* The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location

26. **Claim 11** is taught by Leung as shown supra with respect to claim 8.

27. Leung does not explicitly teach the use of a mapping between files and their storage location to allow the retrieval of the stored files.

28. The Microsoft Windows NT Server Administrator's Bible: Option Pack teaches:

bb. *Wherein the storage grid manager further maintains a mapping that associates the files with the selected storage cells in which the files are stored.* The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location.

29. Leung and the Microsoft Windows NT Server Administrator's Bible: Option Pack are analogous art because they are from the same field of endeavor, the design of distributed storage systems.

30. At the time of the invention it would have been obvious to one of ordinary skill in the art to store a tree representing the locations of stored files on the server that users contact to store files.

31. The motivation for doing so would have been to allow users to retrieve their stored files, even if they had been moved by the DMS.

32. Therefore it would have been obvious to one of ordinary skill in the art to combine The Microsoft Windows NT Server Administrator's Bible: Option Pack with Leung for the benefit of allowing users to retrieve their stored files to obtain the invention as specified in **claims 11-12**.

33. **Claim 12** is taught by the Microsoft Windows NT Server Administrator's Bible: Option Pack as:

cc. *The system of claim 11, wherein the storage grid manager further receives requests to retrieve the files from the users, and wherein the storage grid manager consults the mapping to identify the selected storage cells and retrieve the files.* The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location.

34. **Claim 20** is taught by Leung as shown supra with respect to claim 15.

35. Leung does not explicitly teach the use of a mapping between files and their storage location to allow the retrieval of the stored files.
36. The Microsoft Windows NT Server Administrator's Bible: Option Pack teaches:
dd. *Further comprising the storage grid manager maintaining a mapping that associates the files with the storage cells in which the files are stored, after the storing step.* The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location. The mapping must be maintained after the storing step to allow the users to locate their files after they are stored.
37. Leung and the Microsoft Windows NT Server Administrator's Bible: Option Pack are analogous art because they are from the same field of endeavor, the design of distributed storage systems.
38. At the time of the invention it would have been obvious to one of ordinary skill in the art to store a tree representing the locations of stored files on the server that users contact to store files.
39. The motivation for doing so would have been to allow users to retrieve their stored files, even if they had been moved by the DMS.
40. Therefore it would have been obvious to one of ordinary skill in the art to combine The Microsoft Windows NT Server Administrator's Bible: Option Pack with Leung for the benefit of allowing users to retrieve their stored files to obtain the invention as specified in **claims 20-21**.

41. **Claim 21** is taught by the Microsoft Windows NT Server Administrator's Bible:

Option Pack as:

ee. The method of claim 20, further comprising retrieving the files from the appropriate storage cells with the following steps: receiving requests on the storage grid manager to retrieve the files; consulting the mapping to identify the storage cells in case that a storage cell that is identified based on a geographical parameter is not optimal; and retrieving the files from the storage cells. The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location. It would be obvious to use a mapping to locate the stored data even if it was stored in the location it is stored in because a geographical parameter was not optional.

42. **Claim 22** is taught by Leung as shown supra with respect to claim 15. The same DMS that routes the files to the storage locations would also retrieve the files in a similar manner.

43. Leung does not explicitly teach the use of a mapping between files and their storage location to allow the retrieval of the stored files.

44. The Microsoft Windows NT Server Administrator's Bible: Option Pack teaches:

ff. Receiving requests that are remote from storage cells of the enterprise storage system on a storage grid manager to retrieve the files; identifying storage cells of the enterprise storage system in which the files are stored based a

mapping; The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location. Leung figure 1 shows User Systems 102 separated from Storage Devices 116 by a Communication Network 112.

45. Leung and the Microsoft Windows NT Server Administrator's Bible: Option Pack are analogous art because they are from the same field of endeavor, the design of distributed storage systems.

46. At the time of the invention it would have been obvious to one of ordinary skill in the art to store a tree representing the locations of stored files on the server that users contact to store files.

47. The motivation for doing so would have been to allow users to retrieve their stored files, even if they had been moved by the DMS.

48. Therefore it would have been obvious to one of ordinary skill in the art to combine The Microsoft Windows NT Server Administrator's Bible: Option Pack with Leung for the benefit of allowing users to retrieve their stored files to obtain the invention as specified in **claims 30-31**.

49. **Claim 23** is taught by the Leung as:

gg. The method of claim 22, further comprising storing the files, prior to the receiving step, with the following steps: receiving requests on the storage grid manager to store the files. See data management server (DMS) item 104 of figure 1. Paragraph 0078 discuss conditions in which the DMS decides where to

store data, and lines 18-21 show that one such condition is when a user stores a data file in the storage system.

hh. *Identifying storage cells of the enterprise storage system for storing the files based on at least one performance parameter.* Paragraphs 0049-0055 give examples of device performance parameters that are used by the DMS to determine the storage location.

ii. *Routing the requests to store the files from the storage grid manager to storage grid controllers associated with the storage cells, and storing the files in the storage cells.* Paragraph 0029 lines 1-4 shows that the DMS automates the storing of data to the available storage devices.

50. **Claim 24** is taught by Leung as:

jj. *The method of claim 23, wherein the at least one performance parameter is selected from the group consisting of a user identity, a storage cost, a user requirement, a desired cell usage pattern, a security requirement, a storage cell availability, a redundancy requirement and a network optimization requirement.* Paragraphs 0050-0055 and 0059-0064 give examples of the parameters the DMS may use to decide file storage locations. These examples include user identity, storage cost, user requirements, usage patterns, storage availability, redundancy and network optimization.

51. **Claim 30** is taught by Leung as shown supra with respect to claim 8.

52. Leung does not explicitly teach the use of a mapping between files and their storage location to allow the retrieval of the stored files.

53. The Microsoft Windows NT Server Administrator's Bible: Option Pack teaches:

kk. *Wherein the storage grid manager further maintains a mapping that associates the files with the selected storage cells in which the files are stored.*

The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location.

54. Leung and the Microsoft Windows NT Server Administrator's Bible: Option Pack are analogous art because they are from the same field of endeavor, the design of distributed storage systems.

55. At the time of the invention it would have been obvious to one of ordinary skill in the art to store a tree representing the locations of stored files on the server that users contact to store files.

56. The motivation for doing so would have been to allow users to retrieve their stored files, even if they had been moved by the DMS.

57. Therefore it would have been obvious to one of ordinary skill in the art to combine The Microsoft Windows NT Server Administrator's Bible: Option Pack with Leung for the benefit of allowing users to retrieve their stored files to obtain the invention as specified in **claims 30-31**.

58. **Claim 31** is taught by the Microsoft Windows NT Server Administrator's Bible: Option Pack as:

II. *The program product of claim 30, wherein the storage grid manager further receives requests to retrieve the files from the users, and wherein the storage grid manager consults the mapping to identify the selected storage cells and retrieve the files.* The 9th paragraph of page 2 shows that clients connect the server containing a Dfs tree, which stores a file system directory that associates stored files with their storage location.

59. **Claims 3, 10, 19, and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung in view of Armitano et al (US 2004/0230795).

60. **Claim 3** is taught by Leung as shown above with respect to claims 1 and 2.

61. Leung does not teach the storage devices further enforcing access control specifications for the storage cells.

62. Armitano teaches the use of a policy engine with a storage device to allow it to process access control policies for a storage device (see paragraph 0007). Paragraphs 0024-0027 give examples of the type of access control policies enforced by the policy engine.

63. Leung and Armitano are analogous art as they are from the same field of endeavor, the design of data storage devices.

64. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a storage device including a policy engine as taught by Armitano as the storage devices in the storage system of Leung.

65. The motivation for doing so would have been lessening the load on the storage device's CPU by allowing policies to be enforced by a separate device (Armitano paragraph 0017 lines 1-5)

66. Therefore it would have been obvious to combine Armitano with Leung to obtain the invention as specified in **claim 3**.

67. **Claim 10** is taught by Leung as shown above with respect to claims 8 and 9.

68. Leung does not teach the storage devices further enforcing access control specifications for the storage cells.

69. Armitano teaches the use of a policy engine with a storage device to allow it to process access control policies for a storage device (see paragraph 0007). Paragraphs 0024-0027 give examples of the type of access control policies enforced by the policy engine.

70. Leung and Armitano are analogous art as they are from the same field of endeavor, the design of data storage devices.

71. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a storage device including a policy engine as taught by Armitano as the storage devices in the storage system of Leung.

72. The motivation for doing so would have been lessening the load on the storage device's CPU by allowing policies to be enforced by a separate device (Armitano paragraph 0017 lines 1-5)

73. Therefore it would have been obvious to combine Armitano with Leung to obtain the invention as specified in **claim 10**.

74. **Claim 19** is taught by Leung as shown above with respect to claim 15.

75. Leung does not teach the storage devices further enforcing access control specifications for the storage cells.

76. Armitano teaches the use of a policy engine with a storage device to allow it to process access control policies for a storage device (see paragraph 0007). Paragraphs 0024-0027 give examples of the type of access control policies enforced by the policy engine.

77. The policy engine enforces access control before the file is stored in the storage device (see figure 2, discussed in paragraph 0035).

78. Leung and Armitano are analogous art as they are from the same field of endeavor, the design of data storage devices.

79. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a storage device including a policy engine as taught by Armitano as the storage devices in the storage system of Leung.

80. The motivation for doing so would have been lessening the load on the storage device's CPU by allowing policies to be enforced by a separate device (Armitano paragraph 0017 lines 1-5)

Therefore it would have been obvious to combine Armitano with Leung to obtain the invention as specified in **claim 19**.

81. **Claim 29** is taught by Leung as shown above with respect to claims 27 and 28.

82. Leung does not teach the storage devices further enforcing access control specifications for the storage cells.

83. Armitano teaches the use of a policy engine with a storage device to allow it to process access control policies for a storage device (see paragraph 0007). Paragraphs 0024-0027 give examples of the type of access control policies enforced by the policy engine.

84. Leung and Armitano are analogous art as they are from the same field of endeavor, the design of data storage devices.

85. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a storage device including a policy engine as taught by Armitano as the storage devices in the storage system of Leung.

86. The motivation for doing so would have been lessening the load on the storage device's CPU by allowing policies to be enforced by a separate device (Armitano paragraph 0017 lines 1-5)

Therefore it would have been obvious to combine Armitano with Leung to obtain the invention as specified in **claim 29**.

87. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al (cited supra) in view of Microsoft Windows NT Server Administrator's Bible: Option Pack Edition (cited supra) and further in view of Armitano (cited supra).

88. **Claim 26** is taught by Leung in view of the Microsoft Windows NT Server Administrator's Bible: Option Pack Edition as shown supra with respect to claim 22.

89. Leung in view of the Microsoft Windows NT Server Administrator's Bible: Option Pack Edition does not teach the storage devices further enforcing access control specifications for the storage cells.

90. Armitano teaches the use of a policy engine with a storage device to allow it to process access control policies for a storage device (see paragraph 0007). Paragraphs 0024-0027 give examples of the type of access control policies enforced by the policy engine.

91. Leung in view of the Microsoft Windows NT Server Administrator's Bible: Option Pack Edition and Armitano are analogous art as they are from the same field of endeavor, the design of data storage devices.

92. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a storage device including a policy engine as taught by Armitano as the storage devices in the storage system of Leung in view of the Microsoft Windows NT Server Administrator's Bible: Option Pack Edition.

93. The motivation for doing so would have been lessening the load on the storage device's CPU by allowing policies to be enforced by a separate device (Armitano paragraph 0017 lines 1-5)

Therefore it would have been obvious to combine Armitano with Leung in view of the Microsoft Windows NT Server Administrator's Bible: Option Pack Edition to obtain the invention as specified in **claim 26**.

Allowable Subject Matter

94. **Claims 7, 14, 17, 25, and 33** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

95. **Claims 7, 14 and 33** recite the limitation "*wherein the requests are routed to the selected storage cells in identical communication protocols in which the requests are received by the storage grid manager*". This limitation is taught by the specification at paragraph 0026. This limitation in combination with the other recited limitations are not taught or suggested by the prior art of record.

96. **Claims 17 and 25** recite the limitation "*wherein the routing step comprises routing the requests to the storage cells in identical communication protocols in which the requests are received by the storage grid manager*". This limitation is taught by the specification at paragraph 0026. This limitation in combination with the other recited limitations are not taught or suggested by the prior art of record.

Response to Arguments

97. Applicant's Arguments filed 6/7/2006 have been given full and careful consideration by the Examiner, but are found only partially persuasive.

98. **First point of Argument**

99. On page 11, Applicant argues that paragraphs 0003, 0004 and 0025 provide "*at least one embodiment in which an optimality of a storage cell that is geographically the closest to the user making the request is determined prior to other factors being taken into account.*" The Examiner is convinced that the specification contains sufficient evidence to support the limitation "*in case that a storage cell that is identified based on a geographical parameter is not optimal*" in claims 1, 8, 15, 22, and 27. Accordingly, the rejection of claims 1-21 and 27-33 under 35 USC 112 first paragraph written description requirement is withdrawn.

100. **Second point of Argument**

101. On page 12, Applicant argues that paragraphs 0023-0026 provide sufficient description of the limitation "*wherein the requests are routed to the selected storage cells in identical communication protocols in which the requests are received by the storage grid manager*" to overcome the rejection of claims 7, 14, 17, 25, and 33 under 35 USC 112 first paragraph enablement requirement. Upon further consideration of the cited portions of the specification, the Examiner is convinced that one of ordinary skill in the art would be able to make and use the invention without undue experimentation. Accordingly, the rejection of claims 7, 14, 17, 25, and 33 under 35 USC 112 first paragraph enablement requirement is withdrawn.

102. **Third point of Argument**

103. On page 13, Applicant argues with respect to the rejection of claims 1, 2, 6, 8, 9, 13, 15, 16, 18, 27, 28, and 32 under 35 USC 102(e) "*that Leung fails to teach requests for storing files from users that are remote from storage cells of the enterprise storage*

*system, wherein the selected storage cells are identified based on at least one predetermined performance parameter in case that a storage cell that is identified based on a geographical parameter is not optimal.” Applicant further argues “Interpreting Leung solely for the purpose of this response, to the extent that a geographical determination may be made, the device upon which the data file is stored when the constraint information is set to LOCAL is local to the device used to create the data file, e.g. the local hard drive, and as such, is not a remote from the request or from the user making the request.” The Examiner respectfully disagrees with applicant’s interpretation of the cited portion of Leung. The cited portion, paragraph 0076 lines 10-16, states “the constraint information may be set to LOCAL (e.g. location constraint information for placement rules 308-1 and 308-6) which implies that the data file will be stored on a local storage device (local to the device used to create the data file) and will not be moved or migrated to another storage device”. Leung, in paragraph 0031, explains that storage devices are shown in figure 1 as items 116. There is no indication that a storage device that is “local to the device used to create the data file” is a **part** of the device used to create the data file.*

104. Fourth point of Argument

105. On page 14, Applicant argues with respect to the rejection of claims 3-5, 10-12, 19-21, 22-24, and 29-31 under 35 USC 103(a), “that the combined features of the cited art fail to teach each and every feature of the claimed invention. For example, with respect to independent claim 22, as argued above with respect to independent claims 1, 8, 15, and 27, Leung fails to teach or suggest a geographically separated enterprise

storage system. Furthermore, with respect to independent claim 22, as argued above with respect to independent claims 1, 8, 15, and 27, Leung also fails to teach or suggest the selected storage cells are identified based on at least one predetermined performance parameter in case that a storage cell that is identified based on a geographical parameter is not optimal. Bible does not cure this deficiency." The Examiner respectfully disagrees, and refers to the discussion *supra* with respect to the rejection of claims 1, 2, 6, 8, 9, 13, 15, 16, 18, 27, 28, and 32 under 35 USC 102(e).

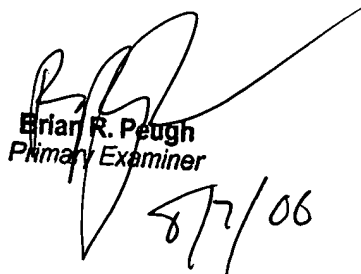
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared I. Rutz whose telephone number is (571) 272-5535. The examiner can normally be reached on M-F 8:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Jared I Rutz
Examiner
Art Unit 2187


Brian R. Peugh
Primary Examiner
8/7/06

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